



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,435	06/09/2006	Rene L. Cruz	0321.68813	4864
24978 7590 10/22/2010 GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606				
EXAMINER				
PHAN, MAN U				
ART UNIT		PAPER NUMBER		
2475				
MAIL DATE		DELIVERY MODE		
10/22/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/582,435

Applicant(s)

CRUZ, RENE L.

Examiner

Man Phan

Art Unit

2475

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 13-15 and 20-33 is/are rejected.
- 7) ☒ Claim(s) 5-12 and 16-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date 8/31/10
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This communication is in response to applicant's 6/21/2010 communications in the application of Cruz for **"RESOURCE SHARING BROADBAND ACCESS SYSTEM, METHODS, AND DEVICES"** filed 6/9/2006. This application is a national stage entry of PCT/US04/42696, International Filing Date: 12/17/2004, and Claims Priority from Provisional Application 60531475, filed 12/19/2003. Claims 1-33 are pending in the application.
2. The applicant should use this period for response to thoroughly and very closely proof read and review the whole of the application for correct correlation between reference numerals in the textual portion of the Specification and Drawings along with any minor spelling errors, general typographical errors, accuracy, assurance of proper use for Trademarks TM, and other legal symbols @, where required, and clarity of meaning in the Specification, Drawings, and specifically the claims (i.e., provide proper antecedent basis for "the" and "said" within each claim). Minor typographical errors could render a Patent unenforceable and so the applicant is strongly encouraged to aid in this endeavor.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 22-27 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, specifically, as directed to "a gateway device implemented in software stored on a computer readable medium" or "a software routine". The claimed

“computer readable medium” or “software routine” of claims 22-27 is non-statutory as at no time in the claim does applicant define the software routine. The claimed machine readable storage medium reads on non-statutory embodiments of computer readable media drawn to signals. As signals are not a tangible medium, the instant claims 22-27 does not recite a tangible result in a form that is useful to the user of the process. The phrase “*computer-readable medium*” recited in the claim is not a non-transitory form of signal transmission indicating in the claim or specification or in the record. Therefor claim 22-27 is considered to be a signal per se.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 28-29 and 13-14, 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotzin (US#7,113,771) in view of Fischer (US#2006/0203841).

With respect to claim 1, the reference discloses a novel system and method for resource sharing among a plurality of clients within a common wireless communication network, according to the essential features of the claims. Kotzin (US#7,113,771) discloses method for providing shared communication resource access (See the Abstract; Figs 1-9 and Col.), Kotzin discloses the steps of: establishing a network of clients (Fig. 4; 106A-106N; Col.), wherein the clients comprise separate residential units or business units; providing a communication protocol between the network of clients (Figs. 1, 4-5, 7 and Col.). It's also noted that It is well known to

one of skill in the art that wired connectivity to internet accesses (such as cable, xDSL, fiber, Ethernet) have been commercially available for both residential and business for many years (official notice is taken).

However, Kotzin does not disclose expressly wherein at least a plurality of the clients in the network of clients have a their own associated communication resource connection; wherein providing a protocol for sharing the communication resource connections of the at least some of the clients to the network of clients; and spreading communications from a client in the network of clients among the communication resource connections of the at least a plurality of the clients in the network. In the same field of endeavor, Fischer (US#2006/0203841) teaches establishing a network of clients wherein at least a plurality of the clients in the network of clients have their own associated wired resource access connection (Fischer: Fig 2, LAN network with clients of laptop, PDA, PC, etc., pars 0025-27, their own associated wired resource access connection being provided individual network card to communicate with the network hardware 46); providing a protocol for sharing the wired resource access connections of the at least some of the clients to the network of clients with the aid of the base-station (Figs 1,3, pars 0027, 0030, 0034); and spreading communications (Fig 3), with aid of the base-station, from a client in the network of clients among the wired resource access connections of the at least a plurality of the clients in the network (Figs 1-3, pars 0026-0027, indicating the shared communication medium 102 may be a shared twisted pair connection, a shared optical connection, a shared coaxial connection, or a shared frequency spectrum, e.g. either wired or wirelessly connected with multiple wired and wireless protocols. Devices may transmit a frame to a base station for other devices to process

the frame with a first protocol over the shared media (e.g. with base station's aid for resource sharing scheme).

Therefore, consider Kotzin and Fischer's teachings as a whole, it would have been obvious to one of skill in the art at the time of invention to modify Kotzin's method by incorporating Fischer's teachings in sharing communication resources in multiple communication protocols with both wireline and wireless networks..

Regarding claims 2, 29, Kotzin as modified discloses the method of claim 1, wherein the communication protocol between the network of clients and the base-station comprises a wireless protocol that is implemented via a wireless medium; and wherein one or more clients in the network of clients comprises one or more computers interconnected by a LAN (Kotzin: FIG 1, FIG 4-5, and FIG 7 and the respective sections describing these figures in the disclosure including wireless protocol of IEEE802.11, Bluetooth, and various cellular air interface protocols, etc.).

Regarding claims 3-4, Kotzin further teaches wherein the communications resource access comprises Internet access the communication resource connections of the network of clients comprise Internet access connections, and network of clients comprises a wireless community (Kotzin: Fig. 1, 104, 107A-107D; Fischer: Fig. 1; para. para. [0020]-[0021], [0027]).

Regarding claim 28, it's noted that the use of Encryption may be provided by the device or software to protect client sessions from other clients in the wireless community are well known in the art. Furthermore, the proxies may utilize encryption in their joint communications as a way to provide security for communications of clients with respect to other clients in the wireless community.

Regarding claims 13, 14, Kotzin as modified discloses a method for providing shared communication resource access (Kotzin: Figs 1-9 and Col), the method comprising steps of: Pooling the Internet access connections of a community of clients into a resource available for bursts of traffics to a client in the community of clients by a network medium and protocol shared among the groups of clients (Kotzin: Figs 1, 3, a base station aiding the resources sharing, a plurality of proximal wireless devices (e.g. clients), col 1, line 58 - col 2, line 24, col 6, lines 35-67, also Fischer: Figs 2-3), wherein the clients comprise separate residential units or business units (Fischer: Figs 2-3); and dividing bursts of traffic to or from a client of the community of clients across the Internet access connections created by the step of pooling.). It's also noted that It is well known to one of skill in the art that wired connectivity to internet accesses (such as cable, xDSL, fiber, Ethernet) have been commercially available for both residential and business for many years (official notice is taken).

Regarding claim 30, it's noted that the use of Encryption may be provided by the device or software to protect client sessions from other clients in the wireless community are well known in the art. Furthermore, the proxies may utilize encryption in their joint communications as a way to provide security for communications of clients with respect to other clients in the wireless community.

Regarding claim 31, Kotzin as modified discloses the method of claim 13, wherein one or more clients in the network of clients comprises one or more computers interconnected by a LAN (Kotzin: FIG 1, FIG 4-5, and FIG 7 and the respective sections describing these figures in the disclosure including wireless protocol of IEEE802.11, Bluetooth, and various cellular air interface protocols, etc.).

7. Claims 15, 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kotzin in view of Fischer, and further in view of US 6,119,162, Li (hereinafter Li).

Regarding claims 15, 20-21, Kotzin as modified discloses the method of claim 13, but is silent on wherein accepting client session request for a session with a device outside of the community of clients. In the same field of endeavor, Li teaches that a proxy software can be utilized to initiate a session among clients, either in the wired network or outside the network and reroute (redirect) the network traffic through the proxy software (e.g. communication protocol) for internet access using one or more telephone lines (Li: col 2, lines 24-65, col 5, line 63--col 6, line 3), and capable of making session requests and receiving the packets, and forwarding the packet to the client etc. among the clients in the network or outside the network (e.g. for local and remote clients) (Li: col 2, lines 24-65, col 4, line 66 - col 5, line 11, col 8, lines 30 - 50, col 11, lines 43-53, any client can serve as a server or gateway).

Consider Kotzin as modified and Li's teachings together, it would have been obvious to one of skill in the art at the time of invention to apply commercially available proxy software and protocol in Kotzin as modified's method of resources sharing and enabling each client acting as a proxy server and facilitating communication spreading and sharing among different clients.

Allowable Subject Matter

8. Claims 5-12, 16-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is an examiner's statement of reasons for the indication of allowable subject matter: The prior art of record fails to disclose or suggest wherein the steps of providing

a protocol for sharing comprises: accepting client session requests for a session with a device outside of the network of clients; and providing a proxy between the device outside of the network of clients and a client requesting a client session; wherein the step of dividing comprises choosing one of the Internet access connections based upon usage patterns, as specifically recited in the claims.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Bhagwat et al. (US#5,941,988) is cited to show the session and transport layer proxies via TCP glue.

The Norrell et al. (US#7,529,229) is cited to show the converged home gateway.

The Landry et al. (US#2006/0193310) is cited to show the LAN above telephony methods and devices.

The Lou et al. (US#7,292,560) is cited to show the wireless broadband service.

The O'Neill (US#7,525,937) show the method for extending mobile IP and AAA to enable integrated support for local access and roaming access connectivity.

The Dowling (US#7,032,009) is cited to show the federated multiprotocol communication.

The Van Bemmel (US#2006/0140147) is cited to show the bandwidth allocation protocol for shared wireless networks.

The Gonikberg et al. (US#2007/0036170) is cited to show the collision avoidance in multiple protocol communication networks using a shared communication medium.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton, can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

10/20/2010

/Man Phan/

Primary Examiner, Art Unit 2475